

**ELIMINATION OF PEAK CLIPPING AND IMPROVED EFFICIENCY FOR RF
POWER AMPLIFIERS WITH A PREDISTORTER**

Abstract of the Invention

A predistorter configured for use with an RF power amplifier having an input loop configured to be coupled to the input of the RF power amplifier and peak control circuit. Such an input loop includes a look-up table containing predistortion values to be applied to an input signal, in response to the power in the input signal, for forming a predistorted input signal. The predistorter may further include an output loop, such an output loop configured to measure an intermodulation distortion product of the RF power amplifier output resulting from the predistorted input signal, and operable to update the predistortion values in the look-up table. Such a peak control circuit configured to select a power supply voltage for the RF power amplifier in response to the power in the input signal.